



THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of

Tetsuya KANEMARU, et al

Group Art Unit: 1615

Serial No. 10/679,298

Examiner: VANIK David L.

Filed: October 7, 2003

For: Silicone-Treated Powder, Process of Productions

Thereof and Composition Containing The Same

DECLARATION UNDER RULE 132

Honorable Commissioner of Patents and Trademarks

Washington, D.C. 20231

Sir:

I, Tetsuya KANEMARU, a citizen of Japan, residing at  
2-2-1, Hayabuchi, Tsuzuki-ku, Yokohama-shi, Japan,  
respectively, sincerely and solemnly declare:

That I am by profession a research chemist and  
that I graduated from Tokyo University of Science, Faculty  
of Science and Technology, Department of Chemical

Industries, on March, 1985 and graduated from Graduate School of Tokyo University of Science, Department of Chemical Industries, on March, 1991. Since April, 1991, I have been employed by SHISEIDO COMPANY, LTD. and have been engaged in research, as a researcher, especially developments of surface-treated powder for cosmetics, in the Central Laboratory of SHISEIDO COMPANY, LTD.

THAT I am a joint inventor of the invention of the above-identified U.S. Patent Application (which is referred to as "the present invention" hereinbelow) and am, therefore, completely familiar with the present invention;

THAT I have read and understand the Office Action dated September 11, 2006, with respect to the above-identified application; and

THAT in order to show the patentability of the present invention over the inventions set forth in the cited references, JP08-092484 (JP'484) and JP09-268271 (JP'271) and US2002/014094 (US'094), the following Experiments were carried out under my direction and supervision.

## EXPERIMENTS

500g of sericite (average particle size: 4  $\mu\text{m}$ ) and 15g of methylhydrogenpolysiloxane (product name: Silicone KF99, made by Shin-Etsu Chemical) were dissolved in 50 ml of hexane. This solution was placed in a Henschel mixer and stirred and mixed at room temperature for a predetermined time, then was placed in a dryer of 100°C to evaporate the solvent. The powder was then placed in an electric furnace set to 160°C, 260°C, 400°C, 500°C or 600°C in advance and heated for 3 hours to obtain a silicone-treated powder.

The amount of hydrogen generation was determined by the gas burette method. 4g of the silicone-treated powder and about 80 ml of alcohol were placed in a 200 mL three-necked flask. About 3 ml of 10% aqueous NaOH solution was dropped in the three-necked flask by a closed system to cause the production of hydrogen gas for 5 minutes and the amount of production of hydrogen (mL/g) was calculated. The results are shown in the Table below. The IR charts of these silicone-treated powders are also shown in the attached Figure, together with the original non-silicone-treated powder, where the presence of SiH peaks are shown.

There are no substantial SiH peaks in the curves for the heating at 400°C, 500°C, 600°C as well as the non-silicone treated powder.

The hydrophobicity was determined as follows. A small amount of the powder to be tested was placed on the surface of water in a 100 mL beaker. If the powder was still on the surface of water, the result was determined as "Yes" and if not, the result was determined as "No".

Table

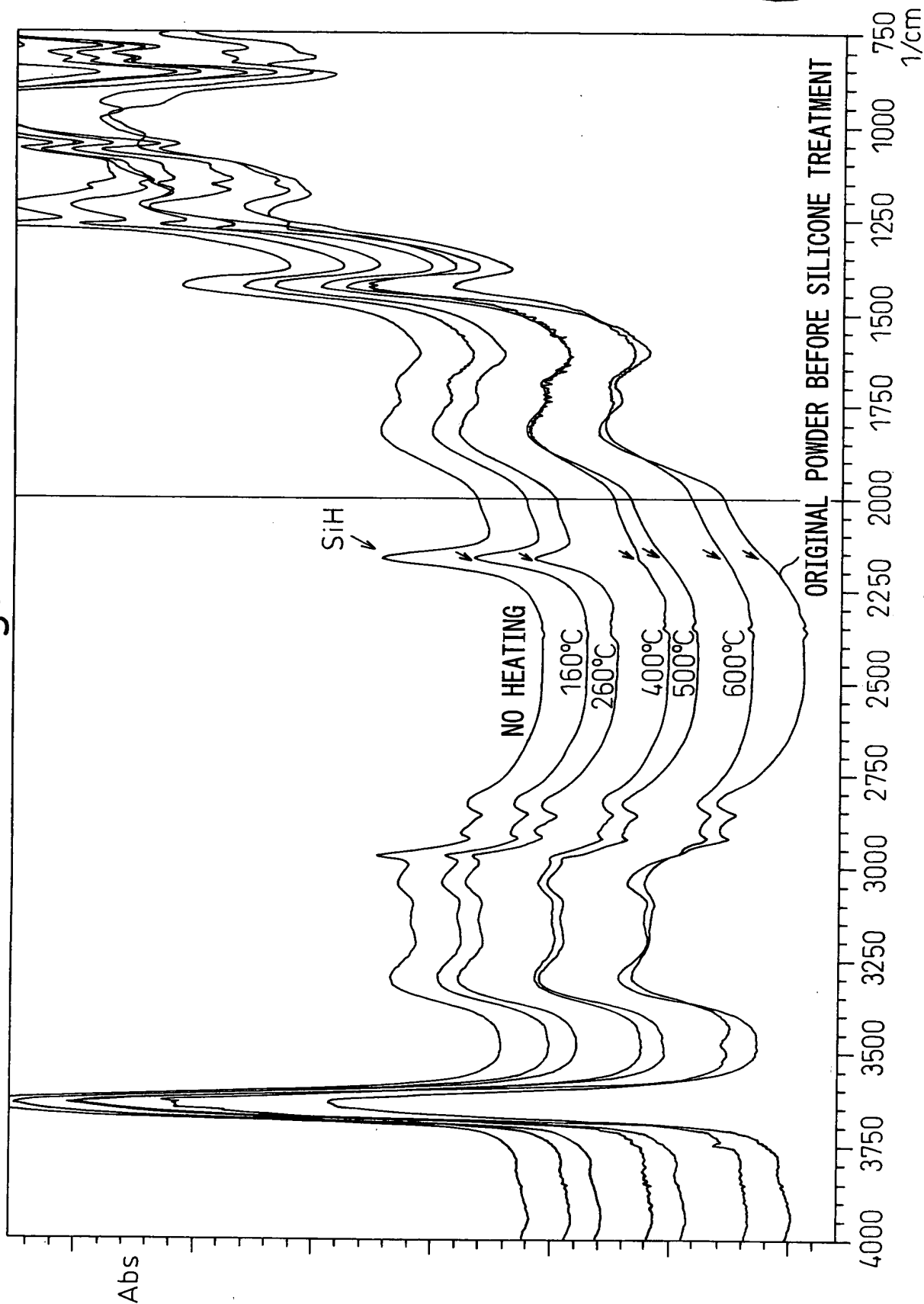
Heating Temp. (°C)	Amount of Hydrogen Generation (mL/g)	Hydrophobicity
Before heating	-	Yes
160	3.32	Yes
260	0.99	Yes
400	0.1	Yes
500	0.07	Yes
600	0.06	No

### CONCLUSION

As is clear from the above results and based upon my knowledge and experiences, I conclude that the desired silicone-treated powder free from the generation of hydrogen, while maintaining the hydrophobicity can be advantageously produced only when a powder is coated with the specified silicone compound, following by heating the silicone compound-coated powder at 260 - 500°C for 0.1 - 24 hours. This is neither disclosed nor taught in the cited references.



Figure



I, the undersigned declarant, declare further that all Statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and; further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001, of Title 18, of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this                      28<sup>th</sup>                      day of                      February                      , 2007

Tetsuya Kanemaru  
Tetsuya KANEMARU